



**SARASWATI**  
**COLLEGE OF PHARMACY**  
Mohali, Punjab

## Sustainable Environment and Water Conservation



NH 05, Chandigarh - Ludhiana Road, Gharuan, Mohali, Punjab - 140413



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### INDEX

1. **Preamble**
2. **Purpose of the Policy**
3. **Scope of the Policy**
4. **Policy Statement**
5. **Water Management Framework**
  - 5.1 Efficient Conservation
  - 5.2 Responsible Consumption
6. **Water Infrastructure System**
7. **Water Quality Management**
8. **Water Audit & Monitoring**
9. **Stakeholder Engagement**
  - 9.1 Student Engagement
  - 9.2 Faculty & Staff Engagement
  - 9.3 Community Outreach
10. **Roles and Responsibilities**
  - 10.1 Management
  - 10.2 Internal Quality Assurance Cell (IQAC)
  - 10.3 Estate / Facility Manager
  - 10.4 Sustainability / Environment Committee
11. **Risk Management**
12. **Performance Indicators**



# **SARASWATI**

## **COLLEGE OF PHARMACY**

Mohali, Punjab

13. **Review and Continuous Improvement**
14. **Key Components of the Institutional Water Action Plan**
15. **Expected Outcomes / Impact Indicators**
16. **Water Conservation Through Installation of Efficient Plumbing Fixtures**
17. **Institutional Practice to Avoid Water Wastage Across the Campus**
18. **Goals and Plans**
19. **Environment & Sustainability Committee Structure**
20. **Water Conservation Audit – Annual Proforma**



## WATER MANAGEMENT AND CONSERVATION POLICY

### PREAMBLE

Saraswati College of Pharmacy acknowledges water as a critical natural resource that supports academic functions, research activities, sanitation, campus greenery, and the overall sustainability of the institution. In light of growing concerns such as declining groundwater levels, climate variability, and increasing operational expenses, the institution recognizes the need for systematic and responsible water management.

The college, therefore, commits to adopting sustainable water management practices by promoting efficient water conservation, optimizing consumption, encouraging recycling and reuse, facilitating groundwater recharge, and fostering awareness and participation among all campus stakeholders.

### PURPOSE

The purpose of this policy at Saraswati College of Pharmacy is to promote responsible and sustainable water management across the campus. The policy seeks to:

- Establish a systematic and efficient water management system within the institution.
- Ensure reliable and sustainable water availability to meet both present and future institutional needs.
- Reduce the overall water footprint across academic, research, and operational activities on campus.
- Encourage a circular water management approach by emphasizing Reduce, Recover, Recycle, and Reuse practices.
- Integrate environmentally sustainable practices into institutional operations and infrastructure.
- Ensure adherence to all applicable statutory requirements and environmental regulations related to water management.

### SCOPE

This policy applies to:

- All academic blocks
- Laboratories
- Administrative offices
- Hostels



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## **COLLEGE OF PHARMACY**

Mohali, Punjab

- Canteen
- Gardens and landscaping areas
- All staff, students, contractors, and visitors

### **POLICY STATEMENT**

Saraswati College of Pharmacy is committed to implementing responsible and sustainable water management practices across the campus. The institution pledges to:

- Ensure responsible and sustainable withdrawal and utilization of water resources.
- Provide safe and potable drinking water for all students, faculty, staff, and visitors.
- Treat and reuse wastewater to the maximum extent feasible.
- Monitor, measure, and document annual water consumption to support informed decision-making.
- Conduct periodic water audits to evaluate efficiency and identify improvement areas.
- Promote awareness and knowledge about water conservation among all campus stakeholders.

### **WATER MANAGEMENT FRAMEWORK**

The institutional water management strategy is built on two key pillars:

#### **1. Efficient Conservation**

- Installation of water-efficient plumbing fixtures and devices.
- Regular inspection for leakages and timely preventive maintenance.
- Adoption of drip irrigation systems for campus landscaping and greenery.

#### **2. Responsible Consumption**

- Systematic monitoring of monthly water usage across campus facilities.
- Implementing measures to reduce unnecessary water use in laboratories.
- Reuse of greywater for non-potable purposes such as flushing and gardening.
- Encouraging responsible and mindful water usage practices among the campus community.

### **WATER INFRASTRUCTURE SYSTEM**

The College will maintain and operate the following infrastructure to ensure efficient water management:

- Overhead storage tanks with defined and monitored capacity.
- Water purification facilities, including filtration and UV treatment systems.
- A Sewage Treatment Plant (STP) for wastewater treatment.



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## **COLLEGE OF PHARMACY**

**Mohali, Punjab**

- A well-designed drainage network to prevent contamination and ensure proper wastewater flow.

### **WATER QUALITY MANAGEMENT**

The institution ensures the safety and quality of water through the following measures:

- Regular laboratory testing of drinking water quality.
- Compliance with nationally prescribed drinking water standards.
- Safe discharge or reuse of treated wastewater in accordance with environmental guidelines.
- Proper hygiene and maintenance of water storage and distribution systems.

### **WATER AUDIT & MONITORING**

To ensure continuous improvement in water management, the college will:

- Conduct annual water audits through qualified or authorized personnel.
- Measure and analyze per-capita water consumption on campus.
- Compare yearly data to track trends and identify areas for improvement.
- Detect departments or facilities with higher water usage.
- Implement corrective measures and efficiency improvement plans wherever required.

### **STAKEHOLDER ENGAGEMENT**

#### **Student Engagement**

- Organizing water conservation campaigns through NSS initiatives.
- Conducting poster competitions, awareness rallies, and educational programs.
- Observing Water Stewardship Week to promote sustainable practices.
- Providing practical learning opportunities through environmental and sustainability projects.

#### **Faculty and Staff Engagement**

- Conducting training and awareness sessions on sustainable water practices.
- Encouraging department-level initiatives to reduce water consumption.
- Prompt reporting and resolution of leakages or water-related issues.

#### **Community Outreach**

- Conducting water conservation awareness programs in nearby villages.
- Collaborating with local governing authorities for sustainable water initiatives.



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**Mohali, Punjab**

- Participating in community activities such as cleaning and restoration of local water bodies.

### **ROLES AND RESPONSIBILITIES**

At Saraswati College of Pharmacy, effective water management is achieved through clearly defined roles and responsibilities among various institutional bodies.

#### **Management**

- Approves the institutional water management policy and oversees its periodic review.
- Allocates financial resources for implementing water conservation measures and infrastructure.

#### **Internal Quality Assurance Cell (IQAC)**

- Monitors the implementation of the water management policy across departments.
- Ensures proper documentation and compliance with institutional and regulatory requirements.

#### **Estate / Facility Manager**

- Responsible for the maintenance of water infrastructure and utilities.
- Monitors water meters and tracks consumption patterns.
- Conducts regular inspections to identify leakages or system inefficiencies.

#### **Sustainability / Environment Committee**

- Organizes awareness programs and conservation campaigns.
- Facilitates internal audits related to water management.
- Prepares and submits annual reports on water performance and sustainability initiatives.

### **RISK MANAGEMENT**

The College recognizes potential risks that may affect water availability and sustainability, including:

- Depletion of groundwater resources.
- Variability or irregularity in rainfall patterns.
- Water loss due to infrastructure leakages or system inefficiencies.
- Increased water demand resulting from institutional growth and expansion.

#### **Mitigation Measures**



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## **COLLEGE OF PHARMACY**

Mohali, Punjab

To address these risks, the institution adopts the following strategies:

- Enhancing water storage capacity within the campus.
- Identifying and utilizing alternative water sources where feasible.
- Implementing routine inspection and preventive maintenance schedules.
- Establishing contingency plans for water conservation during periods of scarcity.

### **PERFORMANCE INDICATORS**

The effectiveness of water management initiatives is evaluated using measurable indicators such as the following:

- Annual reduction in overall campus water consumption.
- Improvement in groundwater recharge and conservation practices.
- Number of water awareness and educational programs conducted.
- Compliance scores obtained through water audits and monitoring activities.

### **REVIEW AND CONTINUOUS IMPROVEMENT**

To ensure long-term effectiveness and sustainability:

- The water management policy is reviewed annually.
- Revisions are made based on findings from audits and monitoring reports.
- Institutional practices are benchmarked against recognized best practices in sustainable water management.
- Innovative technologies and improved conservation strategies are incorporated when feasible.

### **Key Components of the Institutional Water Action Plan**

The institution's structured action plan for water management includes the following elements:

- A formally documented water management and conservation policy approved by the governing body.
- Defined annual targets for water consumption reduction.
- Installation of water-efficient fixtures such as aerators and dual-flush systems.
- Operation of a functional Sewage Treatment Plant (STP) with clearly defined wastewater reuse objectives.
- Implementation of greywater recycling systems for landscaping and sanitation purposes.
- Regulation of laboratory water usage through established Standard Operating Procedures (SOPs).
- Dedicated budget allocation for water conservation infrastructure and improvements.
- Department-wise accountability for monitoring water consumption.
- Preventive maintenance schedules to detect and repair leakages promptly.



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Mohali, Punjab

- Integration of water sustainability principles into campus development planning.
- Development of emergency protocols for water conservation during shortages or crises.

## Expected Outcomes / Impact Indicators

Area	Indicators	Expected Impact
<b>Water Conservation</b>	% of total water reused or recycled (STP + Greywater)	≥ 50% of total campus water demand met through reuse/recycling
<b>Water Efficiency</b>	Reduction in per capita water consumption	≥ 25% reduction from baseline year
<b>Leakage Control</b>	% reduction in water loss due to leakage	≥ 90% leakage control efficiency
<b>Water Quality Management</b>	Compliance with drinking water standards	100% compliance annually
<b>Infrastructure Development</b>	Installation of water-efficient fixtures	100% campus coverage with low-flow/sensor-based systems
<b>Laboratory Water Management</b>	Reduction in laboratory water wastage	≥ 40% reduction through controlled usage systems
<b>Awareness &amp; Training</b>	No. of water conservation programmes conducted annually	≥ 6 programs per year
<b>Community Outreach</b>	No. of external water awareness/eco-projects supported	≥ 8 programs annually
<b>Sustainable Landscaping</b>	% of irrigation through recycled/treated water	≥ 60% irrigation through recycled water

## Water Conservation Through Installation of Efficient Plumbing Fixtures

Saraswati College of Pharmacy promotes water conservation by adopting water-efficient plumbing systems across the campus. The following measures are implemented:

- Installing aerators in taps to regulate water flow while maintaining adequate pressure.
- Using low-flow faucets in wash basins and laboratory facilities to minimize water usage.
- Implementing dual-flush toilet systems to optimize flushing volume and reduce unnecessary water consumption.
- Conducting periodic inspections to ensure that all installed fixtures function efficiently.
- Gradually replacing conventional plumbing fittings with water-saving alternatives in a phased manner.
- Tracking and comparing water consumption levels before and after installation to evaluate the effectiveness of these conservation measures.



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Mohali, Punjab

## Institutional Practice to Avoid Water Wastage Across the Campus

Saraswati College of Pharmacy has implemented a systematic approach to minimize water wastage and promote responsible water use throughout the campus. The key practices include the following:

### 1. Regular Inspection & Monitoring

- Periodic checks of pipelines, taps, valves, storage tanks, and sanitary fittings to ensure proper functioning.
- Continuous monitoring of overhead tanks to prevent overflow.
- Monthly analysis of water consumption data to detect unusual or excessive usage.
- Tracking water usage at the block and departmental levels to enhance accountability.

### 2. Leak Detection & Prompt Repair Mechanism

- Establishing a prompt reporting mechanism for students and staff to notify of leakages or faults.
- Implementing a time-bound repair system to resolve maintenance issues quickly.
- Maintaining a logbook to document reported problems and the corrective actions taken.
- Following a preventive maintenance schedule to reduce the likelihood of recurring leakages.

### 3. Water-Efficient Infrastructure

- Installing water-saving fixtures such as low-flow taps and aerators.
- Using dual-flush systems in washrooms to control water usage.
- Introducing sensor-based taps in suitable areas to minimize unnecessary flow.
- Installing float valves in storage tanks to prevent overflow.

### 4. Administrative Control & Accountability

- Assigning a designated Estate or Facility Manager to supervise compliance with water conservation practices.
- Encouraging departments to take responsibility for monitoring and reducing water usage.
- Allocating budgetary resources for maintenance, repairs, and infrastructure improvements.
- Conducting periodic reviews through the Internal Quality Assurance Cell (IQAC) and the Environment Committee.

### 5. Awareness & Behavioral Measures

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- Organizing regular awareness programs to promote water conservation.
- Displaying informational signboards encouraging responsible water use across the campus.
- Involving NSS units and eco-clubs in water-saving campaigns and initiatives.
- Conducting orientation sessions to sensitize students and staff about environmental sustainability.

### 6. Documentation & Continuous Improvement

- Maintaining detailed records of inspections, maintenance activities, and repair work.
- Conducting annual evaluations to assess progress in reducing water wastage and improving water management practices.
- Maintenance of inspection and repair records.
- Annual evaluation of water wastage reduction performance.

### Goals and Plans

Saraswati College of Pharmacy is dedicated to promoting sustainable water management through strategic planning, efficient resource utilization, and active stakeholder participation. The institution has established the following goals and action plans to strengthen water conservation efforts:

- Improve water-use efficiency across academic buildings, laboratories, hostels, and administrative units to reduce wastage and ensure optimal utilization.
- Implement rainwater harvesting and groundwater recharge systems in existing campus infrastructure and ensure that all future constructions incorporate water conservation designs.
- Invest in modern and sustainable water infrastructure, such as recharge pits, filtration units, storage facilities, and wastewater treatment systems in line with institutional development plans.
- Adopt innovative and environmentally responsible technologies for water and wastewater management suitable for pharmacy education and laboratory-based research activities.
- Promote responsible water use in pharmaceutical laboratories through controlled dispensing methods, efficient cleaning procedures, and proper handling of laboratory effluents.
- Establish and strengthen wastewater treatment and greywater recycling systems for reuse in activities such as gardening, landscaping, and sanitation.
- Ensure the availability of safe and high-quality drinking water for students, faculty, staff, and hostel residents through regular testing and monitoring.
- Raise awareness about water quality protection, including the proper disposal of laboratory chemicals, pharmaceutical waste, and other materials to prevent contamination of water resources.



# SARASWATI COLLEGE OF PHARMACY

Mohali, Punjab

- Organize periodic training and sensitization programs for students, faculty members, laboratory personnel, and supporting staff on water conservation practices implemented on campus.
- Incorporate themes of environmental sustainability and water conservation into pharmacy education, research projects, and institutional extension activities.
- Increase awareness among stakeholders regarding the environmental and economic advantages of water conservation initiatives.
- Encourage student involvement through NSS units, eco-clubs, and institutional committees in conducting water conservation campaigns and outreach programmes.
- Reduce dependence on freshwater sources by promoting the reuse of treated greywater for non-potable purposes such as toilet flushing and landscape irrigation.
- Conduct community outreach activities such as awareness rallies, workshops, and water literacy programmes in nearby villages.
- Establish measurable water conservation targets and monitor annual reductions in overall water consumption.
- Support research and innovation in sustainable water management practices relevant to pharmaceutical and healthcare institutions.
- Cultivate a strong sense of environmental responsibility among pharmacy students as future healthcare professionals.

## Environment & Sustainability Committee

Sr No.	Designation / Role	Position in Committee	Key Responsibilities (Water Conservation)
1	Director of Academics	Patron (Dr. Akash Doomra)	Provides overall strategic direction for institutional water conservation policy and ensures alignment with sustainability goals and accreditation requirements
2	IQAC Coordinator	Chairperson (Mr. Pranit Saraswat)	Leads committee meetings; monitors implementation of the Water Conservation Policy; ensures documentation, audit compliance, and annual reporting of water usage data.
3	Principal	Co-Chair (Dr. Pradeep Goyal)	Ensures integration of water sustainability practices in academic, laboratory, and administrative operations; approves action plans and corrective measures.
4	Associate Professor	Member (Ms. Manika Bala)	Oversees implementation of rainwater harvesting systems, groundwater recharge mechanisms, laboratory water efficiency practices, and infrastructure monitoring.
5	Assistant Professor	Member (Ms. Shivani)	Coordinates awareness programmes, promotes responsible water use among students, assists in water audit data collection, and supports monitoring of water-saving initiatives.



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Mohali, Punjab

## WATER CONSERVATION AUDIT – ANNUAL PROFORMA

Type of Audit / Inspection	Conducted By	Date	Key Findings / Observations	Corrective Actions Taken / Planned	Compliance Status
Water Audit					
STP / Wastewater Treatment Audit					
Water Quality Testing					
Infrastructure & Leakage Inspection					
Laboratory Water Usage Audit					
Groundwater Monitoring Review					

Principal  
Principal  
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